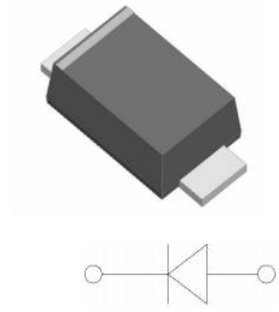


Features

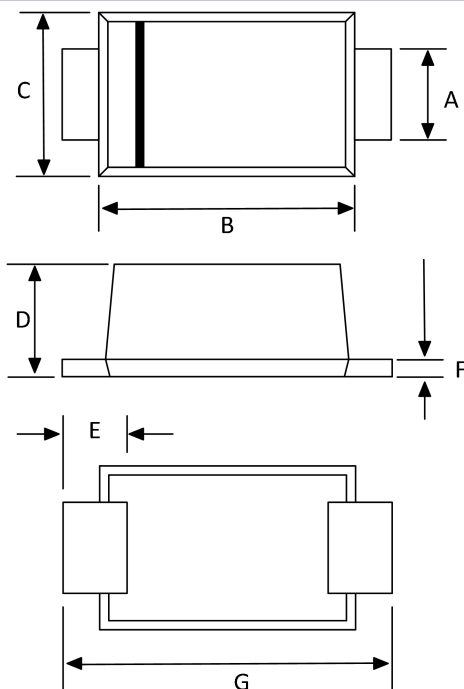
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ Meet RoHS

Mechanical Data

- ◆ Case: SOD-123FL
- ◆ Molding compound meets UL 94 V-0 flammability rating,



Dimensions (SOD-123FL)



Ref.	Millimeters		Inches	
	Min	Max	Min.	Max.
A	0.70	1.10	0.028	0.043
B	2.50	2.90	0.098	0.114
C	1.50	1.90	0.059	0.075
D	0.90	1.10	0.035	0.043
E	0.55	0.95	0.022	0.037
F	0.10	0.20	0.004	0.008
G	3.40	3.80	0.134	0.150

Maximum Ratings and Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter		Symbol	FR 101W	FR 102W	FR 103W	FR 104W	FR 105W	FR 106W	FR 107W	Unit
Maximum Repetitive peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Reverse voltage		V _{R(RMS)}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	V
Average Forward Rectified Current		I _{F(AV)}	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load		I _{FSM}	30							A
Current squared time @1ms≤t8.3≤ms		I ² t	3.7							A ² s
Peak Forward Voltage		V _F	1.3							V
DC Reverse Current at Rated DC Blocking Voltage	T _A = 25 °C	I _R	5							μA
	T _A =125 °C		300							
Reverse Recovery Time(Note)		trr	150				250	500		ns
Typical Thermal Resistance @Between junction and lead		R _{θJL}	20							°C/W
Operating and Storage Temperature Range		T _j , T _{stg}	-55 ~ +150							°C

Note: Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1. Forward Current Derating Curve

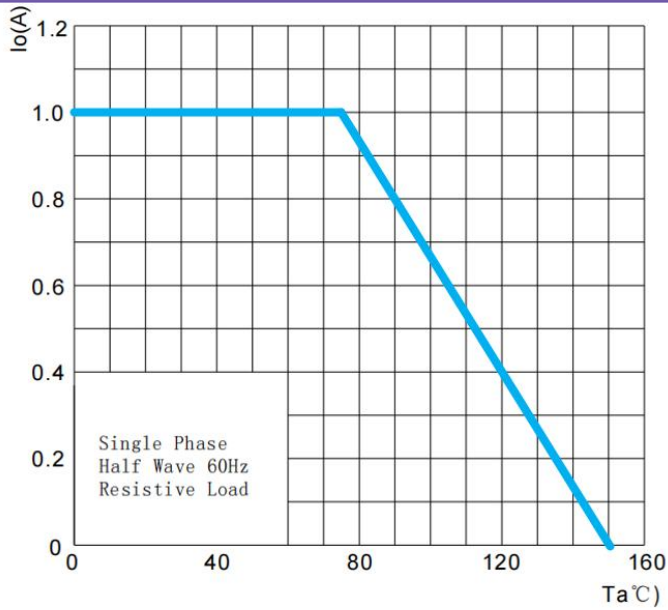


Figure 2. Forward Surge Current Capability

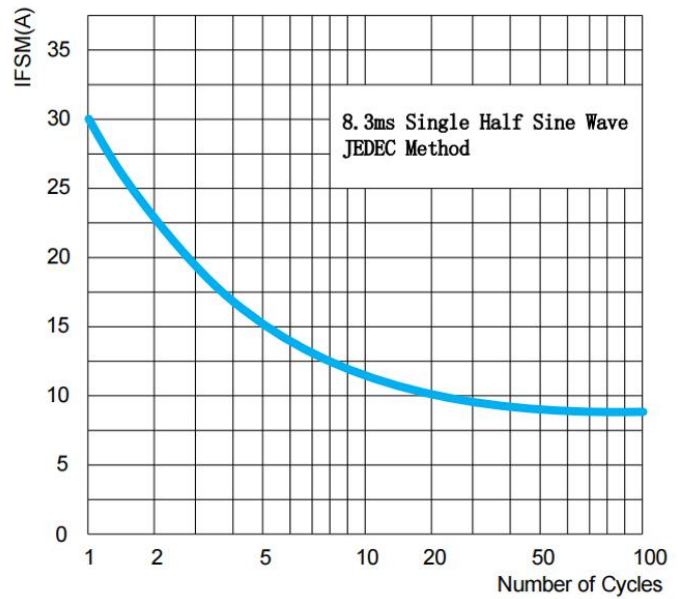


Figure 3. Forward Voltage

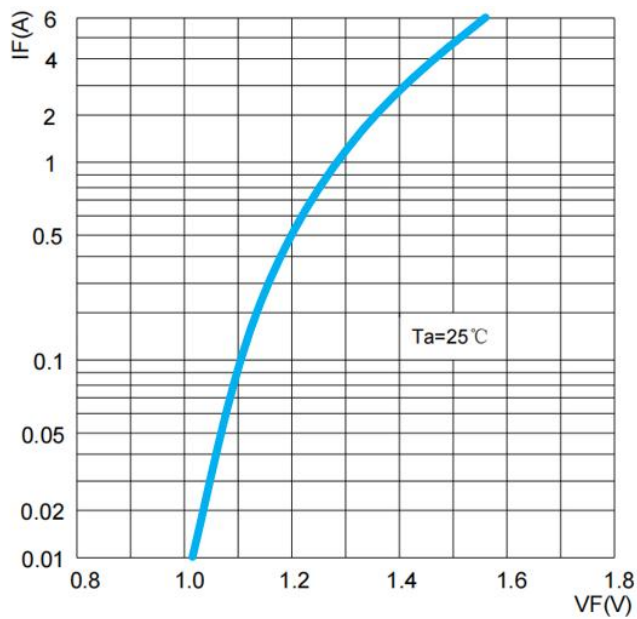
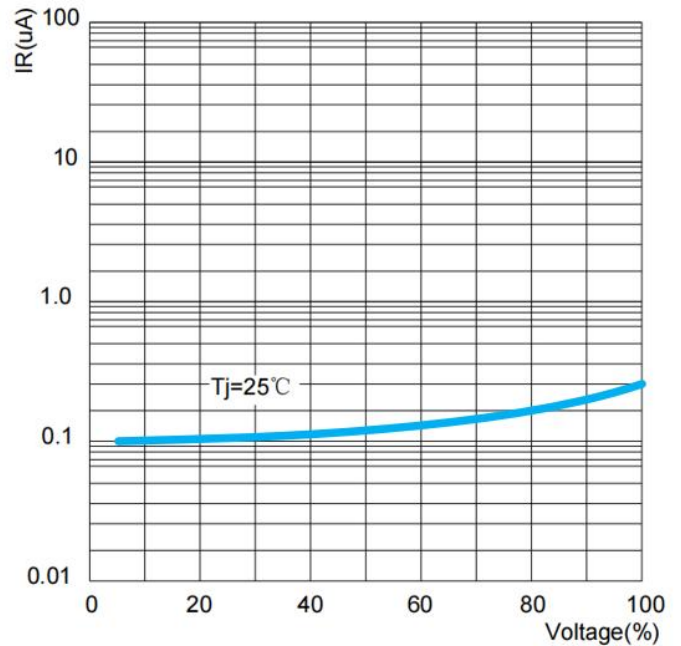
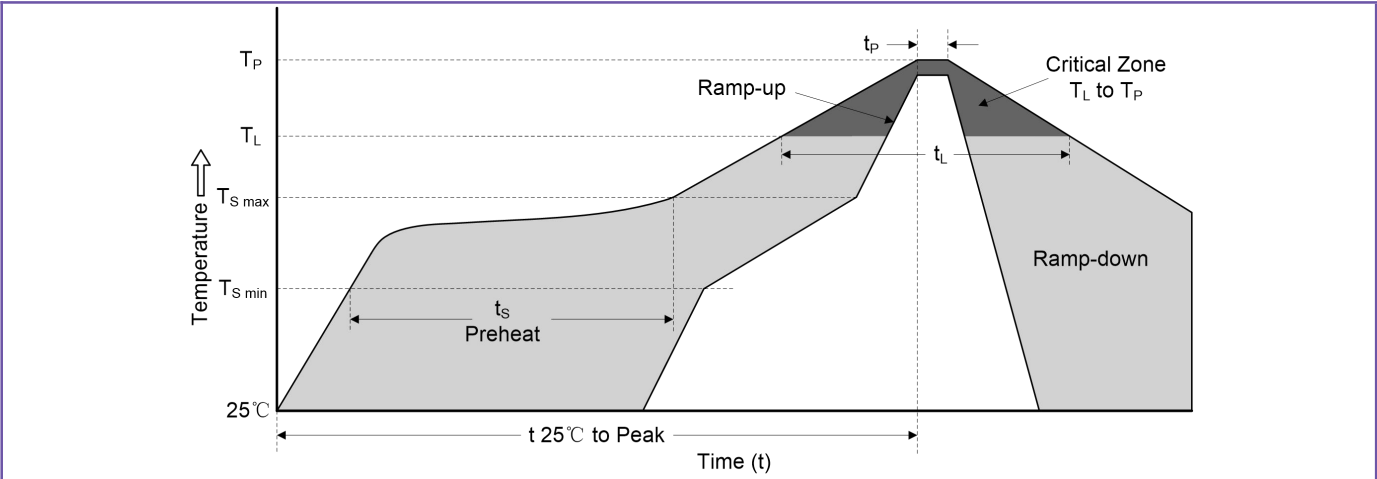


Figure 4. Typical Reverse Characteristics



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-Temperature Min ($T_{S\ min}$)	150°C
	-Temperature Max ($T_{S\ max}$)	200°C
	-Time (min to max) (t_s)	60-120 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°C
Time within 5°C of actual Peak Temperature (t_P)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260°C